MARINE REVIEW.

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Little Faith in Census Figures on Lake Commerce.

According to a bulletin just issued by the United States census bureau, Secretary Keep, of the Lake Carriers' Association, special census agent, figures that during the calendar year 1889 there was received at and shipped from United States ports on the lakes 27,460,260 tons of cargo. Unlike other data emanating from the census office, Mr. Keep's figures with regard to the lake commerce are, of necessity, estimates to a certain extent, on account of the need of laws to govern the collection of statistics, and they have not aroused the interest that should be shown in the presentation of facts regarding this important branch of the transportation business of the country. Mr. Keep has undoubtedly performed his part of the work as well as could be expected of him after the system followed for collecting the data, but the estimates presented by the census bureau—they are nothing more than estimates—will not be accepted by men of lake interests who know, from the vacillating policy pursued with regard to the lakes by census officials ever since the work was begun nearly two years ago, that the outcome can be no more assuring than the incomplete returns furnished at odd periods by customs officials. In fact Mr. Keep's figures are understood to be based mainly on these same incomplete custom house figures, and certain well known vessel owners and iron ore shippers, who are known to have given a great deal of study to statistics, have taken exception to them on this account.

When the work of collecting the data was begun schedules were sent to every vessel owner on the lakes by Mr. Adams, of Michigan, special agent in charge of the transportation department. Mr. Adams had been acting in the capacity of statistician of the Inter-State Commerce Commission, and had been dealing with the officers of railway companies who are compelled by law to make reports in great detail, and the blanks which he sent to individual vessel owners were of a kind that might be sent to a railway corporation where book accounts would show the cost per ton per mile of handling freight, etc. These blanks were loaded down with detail that could not possibly be worked out in the case of more than half of the vessels on the lakes, but the vessel owners were expected to return them ready for compilation to the census office at Washington. This they did not do, but instead of modifying the blank form, and having the statistics collected by agents, as was done in the case of manufacturers throughout the entire country, the unsatisfactory custom house reports were resorted to. Later, a special agent visited Cleveland and other lake cities, and collected some figures from vessel owners who had not returned the first blanks sent them. It is evident, however, that the data contained in this first bulletin sent from the census office was compiled mainly from the figures secured through shippers and custom house records by Mr. Keep, as the greater portion of the first schedules sent on to Washington contained only a very meagre portion of the information requested by the census office, and the vessel owners who supplied some figures in the schedules to get rid of them were never bothered afterward. These estimates from the census office do not satisfy the lake marine, and the question is not whether they give only a part of the business or overestimate it. The demand is for actual figures, with a knowledge of the manner in which they were obtained. In the absence of laws governing the collection of statistics on the lakes, the census bureau has access to the books of the treasury department, which contained last year the names of 3,510 lake vessels, with the names and residences of their owners. Every one of these vessels was in commission, and with the assistance of a representative of the census office their owners, alike to the manufacturers in different lines of business throughout the country, could have furnished all reasonable information regarding the amount of cargo carried during the season, distance covered, etc. Had this been done in a proper manner the result would have been highly beneficial to the lakes, and the census would not be looked upon as a farce. Estimates regarding water transportation would not be set up against facts from the railways.

OFFICERS OF GRAND LODGE E. M. B. A.—ALEX. CLARK, PRESIDENT.

The "Go Strong" Signal.

At a recent meeting of the Cleveland branch of the Excelsior Marine Benevolent Association, order of lake captains, Capt. James Stone introduced a question of importance to lake masters and engineers. The government rules prescribing signals to be used between the pilot house and engine room gives the "strong" signal as "one long whistle or four bells;" not one long whistle or four short whistles. The wording is very plain. Still, it is well known that in many cases on the lakes there are no bells or gongs in the engine room and four short whistles are used for the "strong" signal. When the matter was brought up at the meeting of masters Mr. Harvey D. Goulder, was asked for an opinion with regard to it but his answer was guarded on account of the plain wording of the rule He was inclined to think, however, that the interchange of bells and whistles would not be considered a violation of the law. Many of the masters did not agree with this opinion and they cited cases where the result of a misunderstanding between master and engineer under such circumstances might prove serious. As an argument in favor of the four short whistles instead of four bells it is claimed that the whistle can be heard in the pilot house and the officer on deck is assured that the order has been properly given. This is a good argument but it would seem that there is need of a change in the rule that distinctly specifies "one long whistle or four bells."

Patents for Marine Devices.

Among patents recently granted is one for an anchor invented by Alex. McDougall, Duluth, assigned to the American Steel Barge Co. It consists of a triangle with a single fluke fastened in the center of the side opposite the eyebolt fastening. An invention for life-saving apparatus, the work of W. M. Riley, Cromwell, Conn., consists of a gas reservoir or baloon attached to the top of the life boat mast, which contains a hollow pipe for furnishing gas which is manufactured in the boat. Details are not given but when the sea gets very rough it is supposed that the baloon will lift the boat from the water. Benj. F. Spar, New York, is the patentee of a screw propeller, having a series of spirally arranged and tapering blades in the same plane with the first blade.

Iron and Steel Ships without Frames.

Patents have been granted in England for a new method of ship-building that will probably reduce the cost of punching and riveting from 80 to 90 per cent. Should the experimental ship now under construction on the Thames prove successful lake shipbuilders will be interested as—per cent. of the cost of steel steamers on the lakes is charged to punching and riveting and if four-fifths of that could be retrenched by this new process in addition the cost of frame material it would be worth consideration. Industries, London, has the following to say of the invention. "Naval architects have for many years attempted to to apply hydraulic riveting to the building of our ships, but hitherto they have only succeeded in applying it to a very limited part of the structure. A new method, which will admit of the complete application of hydraulic riveting, the invention of Mr. A. C. Holzapfel, of 57, Fenchurch Street, London, abont to be introduced, consists of building a ship of boxed plates, or plates flanged on all four sides. The invention was thoroughly studied by Mr. Holzapfel in conjuction with several naval architects and engineers, and he has now so far progressed as to arrange for the building of a trial ship, a vessel of small size, to be built on the River Thames. It will be seen that the adoption of this method dispenses entirely with the use of frames and keelsons, and that the flanges of the plates will form an ample substitute for these. For riveting together these flanges a movable hydraulic machine of very light structure can be used, and a similar machine will also be used for the punching of the rivet-holes, both being simultaneously punched, and the rivet-holes being in consequence perfectly fair. Countersinking and surface riveting is consequently entirely dispensed with, and the labour required for the punching and riveting will be reduced from 80 to 90 per cent. on the present total for wages. A second patent for simultaneously shaping and flanging the plates, will also be acquired by the company, but the ultimate intention is, should the method under notice prove a practical success, to shape and flange the plates in heavy cast-iron or cast-steel dies by powerful hydraulic pressure, and to then build a large number of ships of the same sizes and models. We have no doubt that the experiments about to be started will be watched with great interest by the ship-owning and ship-building community; and should the expectations of the inventor be realized, a very important departure in the method of building iron ships will be witnessed in 1891."

Changes in Chicago Channels.

The city of Chicago gained a victory for lake vessel interests by winning a condemnation suit in Judge McConnel's court, but the city of Chicago, represented by the municipal retinue, King Cregier and his courtiers, gave lake vessel interests a decided slap in the face by ignoring arguments against another swing bridge at Canal street. The court case resulted from the city desiring to widen the river 100 feet at Eighteenth street and property owners got verdicts for about half what they demanded, the total of amounts for property to be used being $76,772. Of this amount $56,657 was awarded Robert Law for land taken from his coal yard. The slap in the face was given a delegation of marine men consisting of Capt. Marshall, United States engineer, Alderman Dunham, T. T. Morford, J. C. Evans and Capt. J. L. Higgie, who gave various excellent reasons why shipping on the south branch of the river should not be obstructed. The mayor said that large boats had no business there and that a 59-foot channel was large enough. Mr. Morford replied that this same policy toward vessel interests was giving Milwaukee the coal trade. A bridge giving a 90-foot channel was refused and the vessel men will appeal to the United States courts.

Sturgeon Bay Canal

The vessel owners engaged in Lake Michigan trade are endeavoring to abolish the system of tolls on the Sturgeon bay canal and it is to be hoped that they will be successful, as this is the only waterway on the lakesnow under private control. It is freely charged that the canal corporation has violated the provisions of its charter in failing to make yearly reports, and the tolls are exorbitant. Some vessel owners have paid as high as $4,000, a year. The Whale club, of Milwaukee, has taken the matter up and a committee consisting of Captain Maxon, John Saveland and F. C. Lorenz will select a delegation of vessel owners to visit Madison, the state capital, in the interest of a free waterway. The delegation will at least demand an investigation of the affairs of the present canal authorities.

Iron Direct from the Ore.

The Adams direct process for making iron is demanding a great deal of attention in iron journals. The claim is made that it has in practical tests taken 90 per cent. of the phosphorus out of ore, leaving but .003 of 1 per cent. of that element in the product. The iron thus obtained was made from "all ore" in about six hours in an open-hearth furnace, at the ordinary open-hearth cost for labor, with a loss of the metallic iron in the ore not to exceed 15 per cent. if it equalled that amount. The resulting cinder did not show any greater content of metallic iron than that made by other processes when the ascertained waste was 12½ per cent. The work done thus far is claimed to prove that irons low in phosphorus and with almost any content of carbon needed, up to 50 per cent. can be made direct from the ore at a very moderate cost and with a small waste of the metal. The importance of such a result cannot well be overestimated.

Marine Engine Journals.

EDITOR MARINE REVIEW: As the season of navigation approaches, the lake marine engineers are busy in ascertaining what repairs are necessary on the engines that they are to be placed in charge of; and also in mapping out a plan of procedure for making such repairs and adjustments as their machinery may require, in the best and most expeditious manner. Probably the care of journals requires as much judgment and care on the part of the marine engineer as any other part of his machinery.

No engineer should drive his ship out of port on the first voyage in the spring until he has lifted his journal-caps, thoroughly cleaned every part connected with them, examined them carefully to ascertain if there are any cracks or flaws in the housings, caps, bolts, nuts or shaft. He should then examine the brasses and, if they come together before bringing up on the shaft, have them planed off, (not chipped) so that they will set the same distance apart their entire length. Another very important matter is to ascertain whether there are any little ridges worn in the brasses by the shaft in its natural tendency to travel in the direction in which the crank is turning which is usually to starboard. How many journals there are that will not cause a particle of trouble in a hard run from Buffalo to Duluth, and yet will get hot if backed strong for five minutes. This is often caused by the side thrust of the shaft coming opposite from where it was when going ahead; causing the shaft to ride on the little ridge in the brass formed by the shaft in working principally in one direction. Of course it is understood by all engineers that the bore of the journal-brasses should be exactly parallel with the line of the shaft, top and bottom as well as sidewise; for if it is not parallel the bearing is reduced by the brasses not touching the shaft their entire length, and trouble may be expected. Be sure to give the brasses plenty of clearance on the sides, remembering that in some cases there is such a thing as too good a fit; and if journal brasses are made to fit close to the shaft all around, they will surely cause trouble, as they will prevent the formation of a film oil which should always lie between them and the shaft. And how would it be possible for a journal to run cool without lubrication? In regard to proportions we must generally take things as we find them, as we are not designing or constructing but operating what others have designed and constructed, and it is our duty to do the best we can under the circumstances. The engineer should next ascertain if the brasses are a good fit in their housings, and if they are not, make them so by putting in liners on the sides. There has probably been a good many hot journals caused by engineers screwing down to stop the pound when, if they had taken a little care to examine, they would have learned that the pound was caused by the brasses being a bad fit in their housing. Next, cut good deep oil grooves in the cap brass and be sure that you do not leave any burrs or rough edges along the grooves. Next put the brass in its place letting it go right down on the shaft; then put on the journal-cap, and be sure that it goes down solidly on the brass. Then with a pair of small callipers and a scale, measure the space between the brasses, and also between the housing and its cap on both sides of the shaft. Take up the cap and brass again and put some strips of lead in the spaces you have just measured, making those strips a little thicker than the spaces that they are to go into. Put them in those spaces and again put in your brass and cap, and screw them down solid. Take up the brass and cap again and carefully take out the strips of lead and you will have in them an exact pattern of the spaces between the brasses and under the journal-cap. Now make liners of straight-grained hard wood to put into the spaces from which you have just taken the lead. A good plan is to make those wooden liners just the thickness of the lead patterns, and then build up with layers of thin sheet-iron to allow for compression of the wood and to hold the weight of the cap and brass off the shaft. Put on the brass and cap and screw them down solid on the liners. If all the suggestions mentioned are followed out by a competent engineer and there is still trouble with the journal, look elsewhere for the fault. Of course, journals must be round. No adjustment, no matter by how competent an engineer they may be made will compensate for any lack of roundness in the journal. In all engines there are points where the least work being done the greatest strain is applied. These are the centers, or when the connecting-rod and crank form a straight line, the rod having no rotative effect on the crank, it follows that an extraordinary wear comes on the journals at these points. This is especially the case when the lead or compression is great, as it is the practice now with many engineers running compound and triple expansion engines. Many engineers have found that in changing the lead or compression started a bad pound in the engine. This is generally caused by the strain being changed to a different place in the journal from where it was before. In such cases the proper remedy is to re-bore the brasses and then allow the engine to find the place where the strain should come. Above all things keep everything about the working parts of your engine clean. Dirt may contain foreign matter that will cut your journal and cause you trouble. It takes but a little time and labor to keep things clean; it is surely the best way and in the long run it is the easiest; and you can not afford to jeopardize your reputation in this matter.

The writer does not claim originality for all the above, but has written it merely as a starter, hoping that those with more ability and experience will take up the subject of practical marine engineering and give us the benefit of some of the knowledge they have acquired in years of service in a profession that requires as much skill and intelligence as any other calling under the sun. There are in Cleveland many marine engineers who are well educated, level-headed men, and who would win honor and distinction in any calling. Articles on engineering from the pens of such men could not fail to be interesting to any one, and especially to those interested in lake marine affairs.

F. B. SMITH, Marine Engineer

Cleveland, Ohio, Feb. 9th, 91.

That Liverpool-Chicago Line?

Special Correspondence to the MARINE REVIEW.

DETROIT, Mich., Feb. 12.—At a meeting of directors of Ward's Line, the following executive committee was appointed: Eber Ward, W. H. Stevens, H. S. Hodge and J. V. Moran. Instead of all the responsibility and labor being assumed by Capt. Ward, as formerly, the general direction of affairs will be governed by this committee. The board also appointed Cassius P. Taylor, of Detroit, manager of the line. Mr. Taylor has been identified with marine interests at this port for thirty years, although he is still a young man. At the age of fourteen he entered into the employ of the late H. N. Strong, then one of the most extensive vessel owners on the lakes, and was rapidly promoted until he was appointed superintendent of Strong's fleet of tugs and schooners. Among the vessels the names of which I can now recall, were the schooners Superior, Sweetheart, Swallow, Skylark and Sunnyside, and tugs Sweepstakes, Satellite and Stranger. In 1875 he was appointed United States marshal, and placed in charge of the marine department of this district. This place he held until the advent of a Democratic administration in 1886, when he retired from Uncle Sam's service. For the past two seasons he has been the successful manager of Pridgeon's tug line. Mr. Taylor's business ability and well known hustling qualities will have an extensive field in which to exhibit themselves. All who know him have faith that his services in his new position will be advantageous to his employers, and creditable to himself.

Some weeks ago an item, originating I think in the Milwaukee Wisconsin, went the rounds announcing that a line of steamships would be placed this year between Liverpool or some other British port, and Chicago. The absurdity of such a project was shown up in your columns, and it is not probable that any experienced vessel men have any faith in the idea. Nevertheless an enterprising individual, a Mr. Fairfax, of the genus promoter, is actively endeavoring to work up the scheme. His plan, in substance, is to enlist capital at the lake ports, to the amount of say $5,000. With this stake Mr. Fairfax will go to Chicago and perhaps other lake ports, make provisional contracts with exporters and importers for the transportation of provisions, etc., out, and merchandise inward. With these contracts in his grip, he will hie away to London or Liverpool, where a great stock company (limited) will be speedily formed and the stock taken, he would have the lake subscribers believe, by the "gullible" Britisher. Mr. Fairfax's freight contracts will be transferred to the company for which he will receive a "promoter's fee" of $50,000 or more. He will then return and whack up pro rata with the backers. It's only another mild case after the order of the fellow who would supply New York city with milk via pipe line from the dairy districts. "The woods are full of 'em."

Capt. Robert E. Ferguson, formerly of the Castle, will sail the Gladiator this year.

Ferguson's tugs, Sweepstakes and Crusader, will be officered the same as last season,

Capt. Ed. Tormey this season re-enters Capt. S. B. Grummond's employ. He will probably have command of the tug John Owen.

The Organization of Lumber Carriers

Special Correspondence to the MARINE REVIEW.

WEST BAY CITY, Mich., Feb. 12.—In stating the object of the Saginaw Valley Vessel Owners' Association, Capt. C. H. Weeks said that the vessels cut an important figure in the lumber industry, especially for the Saginaw valley, and yet the vessel owners never received a fair share of the profits of the business, commensurate with the money invested and the risks taken. The loading and unloading of lumber costs at least one-half more than it should. He was aware that it would be a pretty hard matter to leave the old rut but thought the end would pay for the trouble and that the burdens would be equally distributed. His proposition was, first, that it be made a rule all over the lakes that lumber be put on the rail of the vessel free of charge to the vessel owner. Every mill could spare a few men while loading vessels, and if they could not it would be an easy matter to hire a few more for the purpose. Then, too they would take more pains to pile their lumber where it would be more accessible for shipment. Second, he wanted lumber taken free from the rail of the vessel. He thought there was not a consignee who would not rather have the handling while it was being unloaded, as they could then hire and control men who would handle the lumber more carefully and thereby save hundreds of dollars in breakage caused by careless handling. A communication from the Cleveland lumber dealers regarding the matter of making the loading and unloading of lumber subject to competitive bids was read and discussed. The assertion was made by Capt. Ben Boutelle that a longshoreman with 25 cents invested in a leather apron made more money last year than a man with $15,000 invested in vessel property. A committee consisting of Captains Weeks, Boutelle and McLean drafted resolutions covering the rail feature of the business which were unanimously adopted. It was decided to correspond with all the vessel owners around the lakes, asking them to join in carrying out the proposed plans. The association then adjourned to meet February 19 at the same place. Longshoremen and lumber dealers are very much inclined to look upon this action as a bluff that will not work. The lumber shovers say that there is no bonanza in their part of the business, and that working for forty or fifty cents an hour and putting in only a quarter of the time does not pay as well as steady labor at less wages. The mill men claim that the shipping business is already overdone, and that the owners are altogether too greedy for cargoes to let such an agreement stand in their way.

Edwin Eddy, aged 74, died at Saginaw on Wednesday of last week. He was a well known lumber man, and interested in vessel property. Daniel Maxon, of Bay City, has invented a new steam steering gear which he claims will operate much quicker than those now in use. The apparatus is being placed in the tug Witch for a trial, and until the test is made its plan is being kept a secret, although patents have already been taken out.

The mill owners and shippers of the Saginaw Valley will ignore the demand of the recently organized vessel owners, that lumber be delivered on the rail and unloaded from the rail of vessels. They say such plan would give shippers at other ports an advantage over them. Vessels will be so plentiful, they think, that their owners will not hang together. The longshoremen also look at the rail demand as a bluff.

Eddy & Shaw's fleet will be commanded as follows: Steamer John F. Eddy, H. L. Shaw; steamer C. A. Eddy, H. Zealand; schooner John Shaw, Charles Ludwick; schooner N. A. Eddy, W. E. Chateau.

Adopt the Signal Code.

Special Correspondence to the MARINE REVIEW.

BUFFALO, N. Y., Feb. 12.—Capt. Dobbins has thoroughly interested the members of the local masters' association in the art of communication at sea by means of flags. He gave them a second talk last Tuesday evening, and this (Thursday) afternoon will discourse for the third and probably the last time. All the captains have become eager listeners, and most of them apt scholars, and they easily can continue the instruction without further assistance from the veteran life-saver, who is always willing to help others. He has shown them that the system is of positive use on the lakes, and that is enough to make the masters follow it up. Suppose a steamer should want to know, early in the spring, when off Thunder bay, and bound up, whether she can get through the ice in the straits; or a badly leaking steamer going down Lake Huron wants a drydock ready on her arrival at Detroit, and dare not make any port to send the request by wire; or a steamer has a loose wheel and wants a tug to meet her from some port ahead, to save time; or a doctor is wanted quickly on board when a steamer is off some port which her master dare not enter for lack of acquaintance; or a steamer is in distress or danger and must have immediate assistance; or suppose any of a hundred other instances of need of help or accommodation, the message could be conveyed to the shore quickly by means of these flags, and replies sent back that the calls for succor would meet with prompt response. There are times when the knowledge that help is coming nerves the distressed to renewed efforts and buoys them up until the danger is past. True, this signal system is not so necessary on the lakes as on the sea, yet it can be employed here to great advantage.

The international code of signals, which has been adopted by about all civilized nations, is worked by nineteen flags—one burgee, one code pennant, four pennants, and thirteen square flags, marked in various colors and devices readily distinguished. The flags represent consonants of the alphabet, and by means of different combinations any information desired can be communicated to a station familiar with the system. A code book, conveniently arranged for quick reference, explains the making and the meaning of the various combinations. A sentence of ten or fifteen words can be communicated by means of one hoist of flags. With ordinary intelligence and earnest application, the rudiments of the system can be learned in a short time. It affords attractive means for study and practice during idle hours. Capt. Dobbins has left two sets of miniature flags and two code books at the rooms of the masters, and they are kept in quite constant use.

The crews at all the life-saving stations are obliged to practice with the code signals once a week, and they become fairly proficient therein. If the lake steamers adopted the signals, the life crews of course would give more attention to the system. As it is, they are ready to communicate by its means whenever called on. Capt. Dobbins says he will pit his crew at Big Sandy, Lake Ontario, against all comers in this art, and the Marblehead crew, Lake Erie, ranks close to the Big Sandy boys.

The steamers of the Lehigh Valley line carry the code signals, but the Niko is the only lake steamer having signal letters from the government. These letters, represented by four square flags, give the name of the craft. They are recorded in the United States list of merchants vessels, by reference to which the name of any steamers can be made out from her distinguishing signal flags.

Capt. Dobbins has been requested by the Buffalo lodge to write to Capt. Bates, commissioner of navigation, asking him to give distinguishing signals to all the lake steamers, and the lodge has addressed a letter to Capt. Bates to the same purport. Capt. Bates has great sympathy for lake people, and undoubtedly will grant the request, so far as he may be able. It is considerable of a job to give a combination of four letters to each steamer without duplicating any, and avoiding those already in use for ocean craft. Capt. Dobbins has consulted Manager Henry, of the Lehigh Valley line, and Managar Caldwell, of the Western Transit line, who thinks favorably of the plan, and will adopt it. The complete cost of a signal outfit is only $25. This includes the nineteen flags and the code book. A steamer might save many times $25 in a few hours by means of the signals.

If the masters' lodges at Cleveland, Port Huron, Bay City and Chicago take hold of this matter as have the Buffalo boys, it can be carried forward to success.

General Manager Gordon, of the Northern Steamship Company, has made appointments as follows for its fleet of fine steel steamers: Northern King, C. W. Brown, master; William Pike, engineer. North Wind, Delos Waite, master; J. F. Finley, engineer. Northern Queen, E. M. Smith, master; A. J. Jones, engineer. Northern Wave, M. Niland, master; Thomas Finley, engineer. Northern Light, C. S. Furey, master; William Erskine, engineer. North Star, William Thorne, master: J. B. Purvis, engineer. The masters are the same as last season.

A New Ship Yard—Winter Work.

Special Correspondence to the MARINE REVIEW.

PORT HURON, Mich, Feb. 12.—Work on the portals of the St. Clair tunnel is now complete. The faces are 150 feet long and 40 feet high, in the middle of which is the tunnel opening, 22 feet in diameter. The retaining walls will extend over 1,000 feet from the portals. Track laying and caulking the seams of the cast iron tubing have been commenced and when finished the tunnel will be ready for the passage of trains. This is considered one of the greatest engineering feats of the decade, and will be complete within two years from the time work was commenced. Hon. Neil Macleod, premier, and Hon. Donald Ferguson, provincial secretary, of Prince Edward island, visited the tunnel last week, for the purpose of obtaining information, there being a project on foot to connect their island with the mainland by a six mile tunnel.

John Nesbit purchased the Grand Trunk Railroad car ferry Huron and will take possession as soon as the tunnel is completed. She will be used to carry coal to the Grand Trunk slip at Point Edwards.

The Wolverine Dry Dock Co. is building a dredge and two scows for parties in Manistee. They are also making extensive repairs on the S. B. Pomeroy.

The Jenks Ship Building Company, W. S. Jenks, president, O. L. Jenks, vice-president and treasurer, A. M. Carpenter, manager and secretary, have been organized with a capital stock of $50,000. They will build and sell wooden steamers of any size. The one on the stocks now is 127 feet keel, 30 feet beam and 9½ feet deep. She will have a Phoenix Iron Works steeple compound engine, 14x28x24, and the boiler will be 7x12 feet and will be allowed 125 pounds steam. This boat is being built near Seventh

street bridge, but after she is launched the other one will be put up on another site that they have in view, the present yard being too small for the next boat that they will build. Parties are negotiating to buy this boat for the lumber trade from Alpena to Detroit. They expect to have her all ready for business not later than the first of June.

The owners of a number of vessels that are in winter quarters at Sarnia have received letters from Cleveland and Cincinnati ice firms asking for what per ton they will carry ice from Sarnia to Cleveland.

The steambarge Nelson Mills is having her engine compounded at the Phoenix Iron Works. The McMorran Wrecking Company are having a large pontoon built at their dock. The ferry Beard and the Hattie Wells are receiving repairs. The ferry Conger parted her wheel chains while coming into Black river, and run into some piles breaking a number of deck beams.

Saginaw River Lumber Business.

The following figures showing the total lumber production on the Saginaw river in years named, and the water and rail shipments in feet, are instructive, as showing the development of the rail trade:

	Feet cut.	Water Shipments.	Rail Shipments.
1880	873,047,731	769,573,000	40,000,000
1881	976,320,317	832,059,939	46,894,932
1882	1,011,274,905	858,344,000	48,197,765
1883	938,675,078	778,702,067	46,680,473
1884	978,497,853	734,928,460	68,728,000
1885	728,498,251	659,665,000	140,672,900
1886	798,826,224	591,013,100	176,500,000
1887	783,661,265	486,185,000	261,900,000
1888	880,669 440	451,391,004	304,362,500
1889	851,623,134	432,130,000	352,500,000
1890	815,054,465	409,972,000	401,847,000

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St.

Stocks.	Par Value.	Bid.	Asked.
Cleveland Iron Mining Company	$ 25 00	$ 16 00	$ 18 00
Champion Iron Company	25 00	90 00	100 00
Chandler Iron Company	25 00	39 00	40 00
Chicago and Minnesota Ore Company	100 00	.....	110 00
Iron Cliffs Iron Company	50 00	.....	125 00
Jackson Iron Company	25 00	90 00	100 00
Lake Superior Iron Company	25 00	65 00	67 00
Minnesota Iron Company	100 00	70 00	80 00
Pittsburg Lake Angeline Iron Co	25 00	145 00	.....
Republic Iron Company	25 00	27 00	29 00
Michigamme	25 00	8 50	10 00

The vessel owners and ore shippers have begun to consider some matters of importance in connection with next season's ore business, but sales seem as far off as ever. The ore companies have been asked in some instances to make prices for next season's delivery on small lots in special cases but they are not warranted in doing so, as such prices must be based on the regular sales. A united effort will be made to obtain a reduction in both handling and railway transportation charges between the mines and shipping ports and between Lake Erie ports and the furnaces. The first step in this direction was taken at a meeting of the executive committee of the Cleveland Vessel Owners' Association, Tuesday, when a committee was appointed to ask for a reduction in handling charges. The ore shippers and furnace men may be expected to look after the rail rates. Another proposition of importance comes from leading vessel owners. They will again attempt to have all vessels in the general carrying trade hold off in fitting out until May 1. There are good arguments in favor of a short season, and it is understood that two or three of the ore companies controlling vessel property are favorable to this plan for the coming season. When it was tried three years ago the great bulk of the tonnage remained in port until the time set for moving but the agreement at that time was not general. There is still little to indicate unusual anxiety among the vessel owners on account of the unfavorable outlook in ore. Many of the lower grade of vessels will go into the lumber trade, on account of the supply of ore being limited and the drift of the lumber business being toward Lake Superior where a better class of vessels will be required. Some of the old hulls that have been carrying lumber will be forced out of existence and these conditions will help in a measure to give the big carriers living freight rates.

It will be known with the close of the present week whether the Vanderbilt interests now negotiating with Mr. M. A. Hanna for the Schlesinger mines and railway will take the properties or not. The mines involved in the deal are the Chapin and the four Negaunee mines. It is proposed to have the Chicago & Northwestern Railway Company take the ore road while capitalists interested in the Northwestern will take the mine.

The Imperial Iron Company, Marquette range, which holds 160 acres, has 14,000 tons in stock, is mining about 6,000 tons a month and expects to have 35,000 tons of ore when navigation opens. The ore is a hematite which had heretofore been sufficienty soft to be easily mined by hand drilling and picking, but power drilling is now necessary and shafts are being sunk after the system followed in the Schlesinger mines.

The Marquette Mining Journal says that men have recently been put to work sinking shafts at both the Lakeside and Barasa mines. These are properties talked of for some time past, from which ore in paying quantities is expected, but trouble is anticipated in sinking the shafts.

The fire at the Chapin mine did not result in doing as great damage as was first reported. The injury to the shaft is but trifling, and no great delay was caused from the fire. The fire originated in an underground engine-house, which was used in the tramming of ore from stopes to the shaft.

Capt. P. Ryan, one of the most successful explorers in the Lake Superior region, died at Republic on Tuesday of last week. He was one of the first to explore the present Republic location and discovered the Riverside mine, in which he held a large interest.

Sault Lock Contract Awarded.

Gen. Poe has been advised that the contract to build the new lock in the Sault canal has been awarded to Hughes Bros. & Bangs of Syracuse, N. Y., their bid being $1,268,500. Work will be begun on the contract as soon as it is possible to get machinery and material on the ground. The lock is to be 800 feet long and 100 feet wide. At the mean of low waters there will be a depth of 21 feet in the lock. At the present stage of water there would be 22 feet 4 inches. In the lock there will be over 80,000 cubic yards of masonry. Over 3,500,000 feet of lumber will be required in its construction. The gates alone will weigh over 1,200 tons. It is hoped that the lock will be completed in five years.

Another Year of Private Lights.

The interminable opposition of Congressman Cannon, chairman of the house committee on appropriations, to the different measures providing for aids to navigation on the lakes has resulted in a great drawback to commerce for the coming season. The lake vessel owners will in all probability be compelled to again pay for the various private lights or do without them, and this in the face of the fact that out of $1,017,600 appropriated for lights and fog signals during the past session the lakes got but $60,000 for a light at Eleven-Foot shoal; in opposition, too, to the oft repeated recommendation from the light-house board that lights that are indispensible be maintained by the government and private lights be prohibited. The northwestern lakes get nothing in the civil sundry appropriation bill excepting a provision that the appropriation of $60,000 made March 2, 1889, for a lighthouse on Simmon's reef, Lake Michigan, be applied under the directions of the lighthouse board for the purchase and equipment of three lightships to be located respectively on Simmon's reef, White shoal and Gray's reef, Lake Michigan. Even this had to be secured as an amendment to the bill by Representative Burton, after a great deal of pleading with Mr. Cannon. The officers of the different lake associations will now look to their senators for amendments to the measure when it comes before the higher body but it is a question whether anything can be secured in this way.

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, ... } PROPRIETORS.
F. M. BARTON, ... }

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St. Mary's Falls and Suez canal traffic: Number of boats through St. Mary's Falls canal in 1890, 234 days of navigation, 10,557; tonnage, net registered, 8,454,425. Number of boats through Suez canal during 1889, full year, 3,425; tonnage, net registered, 6,783,187.

Entered at Cleveland Post Office as Second-class Mail Matter.

THE vessel owners of the lakes may as well make up their minds that they will have another Detroit river bridge bill to fight in the next congress and all on account of Senator McMillan's silent but interminable opposition to a tunnel. He has managed to bury in the senate committee on commerce the bill authorizing the construction of a tunnel, which passed the house at the last session, notwithstanding appeals from every branch of lake shipping and favorable reports during the past seven years from eminent army engineers on the feasiibility of a tunnel. His only excuse now is that Luther Beecher a citizen of Detroit is connected with the tunnel company. Mr. McMillan is reported to have said in substance to Henry M. Cheever, a Detroit attorney representing the tunnel company, that the bill authorizing the tunnel would sleep in the senate committee as long as Luther Beecher is connected with the company asking the charter. In an ordinary legislative body this would be considered presumptuous and arrogant, coming even from a member of the committee. Mr. Beecher may be eccentric in some matters and on this account may have incurred the displeasure of some of Detroit's progressive citizens, but he is only one of a corporation asking for the charter, and Mr. McMillan's position otherwise is generally understood by leading lake vessel owners who have successfully fought the schemes of the railways for a bridge. The Michigan Central Railway is put forward as the great interest that has suffered disadvantages for want of a bridge. Compare the cost per ton per mile of carrying freight over the Michigan Central with other trunk lines, however, and it will not appear as though this great corporatian is at a great loss on account of the Detroit river.

THE ignorance displayed by prominent engineers in different parts of the country regarding the present condition of the Canadian canals in the St. Lawrence river is wonderful. About once a week some engineer or meeting of engineers gives expression to a large supply of buncombe, to the effect that the lakes are at the mercy of British war vessels, and that the largest gun boats in Her Majesty's navy might be sent up to Lake Erie from the Canadian coast on a few days' notice. Nothing could be more absurd, and such statements would not be noticed but for the prominence given them by their repetition through engineers who should be supposed to know better. It will be many years before the locks of the St. Lawrence canals are enlarged to the size of those in the Welland, and only the smaller class of merchant vessels on the lakes can now navigate that waterway.

CONGRESSMAN BURTON'S untiring efforts in favor of the lake marine are appreciated in all of the lake cities Capt. James Millen, of Detroit, said a few days ago that the vessel owners of Cleveland had asked a great deal of Mr. Burton, and he had yet to find a representative from any of the lake districts who had given more attention to the endless detail connected with the work. If for nothing more than a favorable report from the commerce committee of the house with regard to the bill regulating the rafting business, Mr. Burton is entitled to lasting gratitude from the vessel interests.

Cuban Ore and the Shipping Bill.

EDITOR OF THE MARINE REVIEW: If it takes "enthusiasm" to appreciate truth, and calls for indignation to put down falsehood, it is human nature that cannot be too often shown. You people on the lakes with prohibitive protection on your shipping and tariff protection on y ur iron products, seem strangely lacking in Americanism, generosity, consistency or other quality of mind and heart to uudertake the obstruction of legislation to rehabilitate our sea marine. If the tariff on ores is not high enough ask for more. Don't say to the people of the coast, who have been fighting your battles for years past and giving you fair play in harbor appropriations, in holding off foreign competition from destroying our industries, don't say to the coast, "to thunder with your shipping bill!" "We don't approve bounties!" You lake folks don't look well playing that role. If it is "enthusiasm" to point this out, so be it. You need the reminder.

You refer to the fact that American companies are mining ore in Cuba; also point out the fact that British steamers are bringing their ores to market. If the bounty will throw these British steamers out of employment and put American steamers in their places, how is that going to hurt the United States? How will it hurt the shipping of the lakes? How will it damage your iron mining companies? How is the prosperity of the coast going to kill the prosperity of the lakes? All such stuff is bosh; bosh of the thinnest sort. Don't you protected iron people forget history. The highest tariff ever laid in the United States—the tariff of 1828—was laid to protect iron-makers, wool-growers and other interior people, and was laid by the very same statesmen (alleged) that stripped our foreign shipping naked to the competition of the world. Penny wise but pound foolish they were. What our ocean ship owners have lost by this example of disgusting selfishness our whole country has lost, and our iron producers most of all. Had full protection been kept upon our oceanic navigation, as it should have been, we should now have been leading the world in iron ship building and steam navigation. Therefore, think much, before throwing any more cold water on legislation to remedy the evils brought on by the "protectionists" and "free traders"—both at fault—in 828. The interest of the United States is to have American shipping take the place of foreign shipping in our over-sea commerce as soon as possible, and he is not an American who will say nay to this proposition.

G. W. SAMPSON,
806 Eleventh st., N. W., Washington, D. C.

In this letter as in the first one the correspondent evades the position taken by the MARINE REVIEW and launches into a long line of argument in favor of ship subsidies. Every believer in protection favors the shipping bill and there is little need of parading the principles upon which the bill is founded to men of lake interests. They are almost without exception believers in protection to shipping as well as all other industries. It would seem, however, that this protection could be so governed as to not take Cuban ore producers within its folds, and in giving consideration to the bearing which the shipping bill will have upon the Cuban ore business, attention was directed only to the fact that these producers will be benefited by a margin on the tariff as they will own the ships engaged in transporting the ore and will receive the bounty accordingly. Our correspondent avoids the point, although admitting that the bounty would be at least 13½ cents a ton on even small vessels. There is no doubt that the companies now mining and preparing to mine ore in Cuba will own their own ships shortly. These ships will engage in no other than the transportation of this ore and will be the means of giving their owners the additional margin on the ore afforded by the bounty. The Juragua campany, which has already developed Cuban ore property, is an adjunct to the Bethlehem Steel Company, and the ships for this concern are already under way, while the two other leading companies, which have about completed work preparatory to shipping ore, are interested in the American Steel Barge Company and will use the McDougall whale-shaped barges, to compete with the assistance of the bounty against the product of Lake Superior mines. "If the tariff on ore is not high enough" says the correspondent, "ask for more." This is just where the shoe pinches. Has not this same Bethlethem Steel Company and all other eastern furnace interests been fighting the present tariff on iron ore for years? They are free traders in ore and would have the tariff on it abolished long ago but for endangering their position on manufactured products. On this account the untiring efforts of the Western Ore Dealers' Association have been required to keep the tariff on ore where it is at present.

The Third Development in Lake Marine Engineering.

BY S. H. H., MARINE ENGINEER.

In the second issue of this year's Engineer is an article on a typical French commercial steamer, the Polynesien, in which it states that her boilers are of the water tube type, twenty in number; supplying steam at a pressure of 180 pounds to the square inch to a 7,650 horse-power triple expansion engine, driving a hull 602 feet long at a speed of 18 knots an hour. This article also states that the water tube boilers have been in use in other steamships of this line since 1884, and are giving such satisfaction that all their new steamers are to be furnished with this style of boiler. The management have arrived at this decision after a comparative test with the best construction of the return tubular and Scotch boilers; and as these steamers have a continuous run of twenty-two days without any stops at way ports, the test has been a severe one.

The two great developments of marine engineering on the great lakes within the last eight years have been: (1), The increasing of the average steam pressure from about 80 pounds to 150 pounds; and (2), The introduction of the triple cylinder engine to efficiently use this pressure. But as we have gained in one direction we have lost in another. Our boilers, in particular the Scotch, do not give satisfaction. The circulation is very poor in them, and they expand so much more in some parts than they do in others when under a steam pressure, that a boiler perfectly tight when under a hydrostatic pressure of 225 pounds to the square inch, will leak like a sieve under a steam pressure of 100 pounds or less. But worse than all they are big coal consumers, especially if crowded. It seems as if a third great improvement in the practice of marine engineering on our great lakes could be made in adopting some style of a water tube boiler on our steamers.

There are many kinds of water tube boilers in successful operation on shore, and that they are safer and more economical than any other style of boiler is a well known fact. Why then are they not in operation on our inland waters? Simply because our owners are slow in making changes and departing from time-tried methods. The Harrison safety boiler was probably the first of this kind to be generally introduced on shore and a severe test of 875 pounds of steam to the square inch given it in February, 1867, by the committee on science and art of the Franklin institute, failed to burst or explode it. Since then we have had many kinds of water tube boilers placed on the market, the Babcock and Wilcox, Heine safety, the Zell improved, and the Robert's safety water tube marine boiler, of New York City. All are in use and are giving perfect satisfaction. The Roberts safety water tube marine boiler (or one like it in construction) seems to be the coming boiler for our purposes. It has many advantages over our present style of boiler, and the testimony of the purchasers of these boilers justifies the claims made for them, over 300 of them being now in use. They are non-explosive under higher pressures than are used daily on any boiler; they are economical in fuel; have a perfect natural circulation; never require cleaning, as they throw down automatically all sediment and dirt which goes to form scale and they cannot be made to foam. Their center of gravity is low and they do not heat the the boat in which they may be set. They also carry their water with great steadiness, and from the nature of their design are well adapted to the needs of persons who are not engineers by profession, but are intelligent enough to manage a steam craft with a little instruction. The inventor of this boiler, E. E. Roberts, is an engineer by profession and formerly held a commission in the United States navy, so he may rightly claim a knowledge of the requirements of boilers of all classes.

An evaporation test recently made with one of the Robert's safety water tube marine boilers in the jet propulsion boat Evolution, while lying at Tebo's dock in South Brooklyn, showed that the boiler while very economical in fuel evaporated 36,000 pounds of water in one hour, the pressure gauge standing the whole time at 180 pounds.* This would give about 2,000 horse-power with a good compound or triple expansion engine. This boiler is fourteen feet wide and fifteen feet long with 160 square feet grate bar surface, about 12½ horse-power for every square foot of grate surface.

The California Launch Company recently put in one of these boilers to supply a Wells compound engine in a launch on San Francisco bay, and although the expected speed was nine miles per hour the actual speed developed was fourteen and one-half miles per hour. They have ordered eight more boilers for their new boats. The evaporative test is what determines the efficiency of a boiler, however, and owners of lake steamers should test the evaporative powers of their boilers and see how many pounds of water are evaporated per pound of coal burned. Then we will know the value (outside of lasting qualities) of our boilers, and can then compare them with others.

*Any one interested in the technical details of this test, or wishing further information as to the economy and advantage of water tube boilers, can obtain the same by enclosing a stamp to E. E. Roberts, 18 Cortlandt st., New York, N. Y.

Around the Lakes.

The steamer Raleigh will tow the schooners Camden and Thomas P. Sheldon next season.

John Spry, the well known Chicago lumber dealer and vessel owner, died on Friday last. He was in his sixty-third year.

The vessel owners of the Saginaw valley have organized with the following named officers: President, Charles H. Weeks; vice-president, Benjamin Boutell; secretary, J. Fred. Whittemore; treasurer, William H. Sharp.

The steamer Imperial, owned by Milwaukee parties, and tied up at Benton Harbor last fall by the crew to secure their wages, was sold by United States Marshal Clarke, at auction to E. N. Hatch, of St. Joseph, for $525.

Capt. Conley, who sailed the steamer Arcadia through the greater portion of last season, is to assume command of the steamer C. H, Starke on the opening of navigation. Thomas Dunn, mate of the steamer F. & P. M. No. 5, will command the Arcadia.

In answer to an inquiry regarding the largest tow of logs ever made on Green bay the Sturgeon Bay Advocate says that last season a raft belonging to the White & Friant company and containing 4,000,000 feet was towed from Menominee to Sturgeon Bay.

The stockholders of the Goodrich Transportation Company at their annual meeting re-elected officers as follows: President, A. W. Goodrich; vice-president, E. L. Upton; secretary and traffic manager, G. L. Hurson; superintendent, J. W. Gillman, Chicago; general passenger agent, John Singleton, Chicago.

Capt. Madden, who was master and part owner of the steamer Ohio, which was sunk in collision in Hay lake last season, has purchased L. P. Mason's interest in the barges A. T. Bliss and Thos. H. Cahoon. This interest was sold to James McGregor only ten days ago, and it is reported that Mr. McGregor made $1,000 by the operation.

The work of rebuilding the Pennsylvania docks at Ashtabula is assuming large proportions. The docks on both sides of the slip, for its entire length, have been torn out, and the piles sawed off even with the water The new docks are built crib fashion, using the piles for a foundation. The company is also rebuilding several hundred feet of dock along the main river.

Carkin, Stickney & Cram, the extensive dredging contractors of East Saginaw, are making active preparations for the coming season's work. They are now the owners of 12 dredges, 2 rock drillers, 2 derricks, 44 dumps, 10 flats and 8 tugs. The firm has turned out two new dredges since July last, and has contracts now on hand amounting to something like $2,000,000.

According to figures just compiled by Maj. George H. Hopkins, collector of customs at Detroit, the total tonnage of vessels arriving at that port during the year ending on the 1st inst., was 1,351,128 tons, total clearances, 1,355,043 tons. The number of vessels built in the district was fifteen, having a total tonnage of 13,256.40 tons, and valued at $1,366,000. Twenty-five vessels were measured. There are 306 vessels owned in the district, their net tonnage being 117,886 tons.

Advices from Saginaw say, "there seems to be little question that the cut of logs all around the state, as well as in the Georgian bay territory, will be fully 50 per cent. less this season than last. Over in Canada the lumbermen did not cut so much because they were waiting for the duty question to be settled, and when it was taken off logs entirely it was too late for heavy operations. The reason for the shortage on this side may be attributed to so many firms suspending lumbering operations, either owing to failure, or because they have cut about all their pine."

Work of the Ship Yards.

President Goodrich has decided to name the wooden steamer building at Cleveland for the Goodrich Transportation Company Atlanta instead of Dakota.

William Fitch & Son, of Onekama, Mich., are building two small vessels, each 50 feet keel, 13 feet beam and 5 feet hold, to be used as fruit schooners.

At Algonac, the Smiths are building a lumber barge for A. W. Comstock, of Alpena, which will be finished about March 15, will cost $18,000, and have a carrying capacity of 600,000 feet.

If the shipbuilding company engaged in repairing the steamer Onoko at Milwaukee will make satisfactory figures to the owners she will be given a pole spar rig. Work on the hull of the propeller V. H. Ketcham, also undergoing repairs at Milwaukee, is approaching completion. She will be fitted out with pole spars.

The iron steamer Cuba is receiving entire new upper works, with new cabins forward and aft, at Buffalo. The Cuba will also have six new hatchways which will make her complete for carrying all kinds of coarse freight and package freight. The cylinders of her engine are being bored out and her machinery receiving a thorough overhauling. The whole of the work being done will cost about $15,000.

At the annual meeting of the Shoal Water Transportation Company, of Mt. Clemens, Feb. 3, the following directors and officers were elected: C. M. Zengerle, George A. McBean, Capt. William Dulac, Capt. Syd. Scott, William Fluemer, Jr., directors; C. M. Zengerle, president; Capt. William Dulac, vice-president; William Fluemer, Jr., secretary and treasurer. The new steamer being finished at the yard of Capt. William Dulac was named Norwalk. She is 204 feet keel, 39 feet beam and 13½ feet hold. She has iron arches and is diagonally strapped. Her estimated capacity is 1,200,000 feet of dry lumber on 12½ feet draft. Capt. Syd. Scott will sail her. The company presented Archie Stewart, her designer and builder, with a handsome gold watch and chain.

McDougall has prepared plans for a whale-backed passenger steamer. He has also contracted to build a tank ship for the Standard Oil Company, after pattern of those on the coast, and two more for the same concern will probably come out in the latest whale-back style. It was thought these peculiar looking crafts would do to carry ore, but it seems they will be built for anything and no doubt if Charon has the necessary oboluses, an order for a whale-back to take the place of his ancient ferry would be executed. The first tank ship will be 120 feet long, 30 feet beam, 10 feet deep and carry 150,000 gallons. The two following will be 215 feet over all and have capacity for 275,000 gallons, The passenger boat will be a whale in more ways than one, 450 feet long, 50 feet beam and 32 feet molded depth. Her cabins will be arranged similar to those on the Colgate Hoyt, running full length. This idea of whale-backed passenger boats is not new. It dates way back to the time when one was tried on the Mediteranian sea. The testimony of the only passenger as to comforts, etc., is still on record.

Yacht Windlasses.

The seven forty-six feet sailing yachts building by the George Hawley & Sons Corporation at Boston, will have the Providence crank capstans for handling their anchors and chains. The yacht building by L. Marquand at Newburyport will have the Providence patent pump brake yacht windlass. The steam yacht building at East Boston by R. F. Keough will have the Providence steam yacht windlass. The two steam yachts building by Neafie & Levy will have the P.ovidence steam yacht windlasses. It will thus be seen that the best class of yachts as well as steamships all have the Providence windlasses and copstans made by the American Ship Windlass Company, of Providence, R. I.

Excelsior Marine Benevolent Association.

On the title page of this issue will be found a good portrait of Capt Alex. Clark, president of the grand lodge, E. M. B. A. It is the intention of the MARINE REVIEW to publish similar likenesses of all the masters holding important offices in the grand body. The organization has already become a power in affairs of the lakes and is conducted in a manner that recommends it to all interests.

At the regular weekly meeting ot the Cleveland branch, Friday, Captains O. C. McQueen, T. C. Morley, Duncan Nicholson, and Robert Kerr, were initiated and Captain Thomas Gileson was elected to membership. The membership list is steadily increasing

J. W Grover & Son recently presented the Cleveland organization with an elegant silk banner.

Attorney Groat will talk about marine law to the lake masters, Saturday, at 2 p. m., in their rooms on Water street.

The petition favoring the formation of a lodge at Milwaukee contains about 40 uames. The lodge when instituted will probably make use of the Whale club rooms for their gatherings.

The following masters were made members of the Port Huron branch last Thursday: Frances Walters, Henry C. Little, Nelson Little, Thos. Ellery. The meetings will be held at 1 p. m. from this date, so that the members from St. Clair, Marine City, and all out-of-town places may enjoy the meetings and get home the same day.

It is expected that Capt. James Liesk, who has been the master spirit in the movement to organize a branch at Milwaukee, will be chosen president.

Marine Engineers' Beneficial Association.

President Elliott, of the Milwaukee organization, Mr. Fitzgerald, of Port Huron, Messrs. DeWolf and McGrath, the government inspectors of steamboats, and the superintendents of the engineering departments of the shipbuilding companies, were all in attendance at the annual social gathering of the marine engineers of Cleveland last Friday evening, and the ball and banquet was an elaborate and delightful affair. Messrs. Elliott and Fitzgerald were on the way home from the Washington convention, and were highly pleased with the results of the meeting, declaring that it was the most successful ever held.

Cleveland Matters.

Capt. Ira H. Owen, of Chicago, was here during the week looking after business matters.

The underwriters have sold the Cleveland schooner Golden Fleece, ashore at Dunkirk, to Capt. James Reid, the wrecker, for $1,000. The purchase includes the outfit, the buyer to pay the cost of its storage and of stripping the vessel

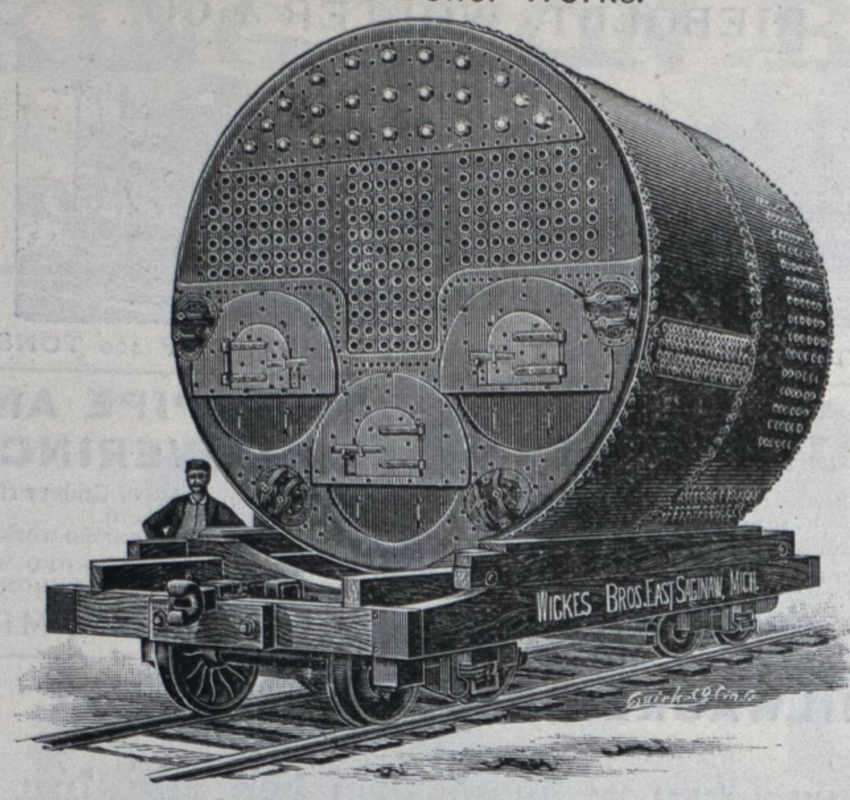
Capt. Rossman, formerly master of the Goodrich Line steamer Menominee, is looking after work on the wooden passenger steamer building here for that company.

Capt. Robert Kerr has purchased one-eighth of the propeller Business from Arthur Wilson for $5,000 and will sail her.

At a meeting of the executive committee of the Cleveland Vessel Owners' Association, Wednesday, Secretary McKay was authorized to employ shipping agents at Fairport and Toledo, the Toledo office to be maintained on the understanding that the membership from that port equals that of last season. Messrs. B. L. Pennington, M. A. Bradley and W. D. Rees were appointed a committee to seek a reduction in the cost of handling ore at Lake Erie ports.

The Northwestern Lumberman gives a correct statement of lumber productions at the principal producing points in the white pine district during 1890 as follows: Menominee and Marinette, 483,907,194 feet; Bay City, 426,502,407 feet; Muskegon, 400,960,202 feet; Saginaw, 381,577,308 feet; Minneapolis, 344,574,262 feet; La Crosse, 236,516,850 feet; Eau Claire, 193,532,179 feet; Manistee 190,379,461 feet.

Wickes Boiler Works.



The Wickes Boiler Works, East Saginaw, Mich., has turned out 200 stationary boilers, besides the marine work, during the last year. None of them were less than five feet in diameter. Their plant is equipped with three complete sets of tools including hydraulic riveters, and is as complete as any on the lakes. The greater part of the year a double force was worked night and day. The marine boilers were: Three 11½x12 feet, steamer Emily P. Weed; two 11½x12 feet, F. & P. M. R. R., steamer No. 5; one 13x13 feet, steamer Charles H. Bradley; one 13½x13 feet, steamer Hiram W. Sibley: one 13x13 feet, steamer Edward Smith; one 13x13 feet, steamer W. H. Sawyer: two 13½x13½ feet, steamer Mackinaw; and two 13½x13½ feet, steamer Keweenaw. The two latter are for the Atlantic coast trade.

In General.

Capt. Porter has sold to Capt. Quinlan, of Detroit, the steamer Swallow. She is valued at $15,000 and measures 203 tons.

M. Mahar, late United States boiler inspector, has gone into partnership with his brother in the National Boiler Works, Bay City.

Messrs. M. Mahar and James Scanlon, of Bay City, have purchased the propeller Sanilac from Wells, Stone & Co., of Saginaw. The boat will continue in the line of business followed last season.

Capt. George Baldwin, one of the oldest and best known of the lake captains, for many years master of the City of Traverse running between Traverse City and Chicago, died at Traverse City on Sunday.

Capt. Nicholsen returned home from Erie, last week where he has been superintending the caulking of the Tom Adams, which he will sail in this season, his mate Geo. Kendall taking the Spinner, and Capt. D. Duncanson going from the Spinner to the Farwell.

Capt. James Knowlton, who has been master of the schooneer George W. Wesley for the past three seasons, will command the schooner Atlanta. Capt. Robert Smith will succeed Capt. Knowlton in the Wesley. Capt. Thomas Brown, of the steamer Lake Michigan, will have charge of the steamer Alma Munro next season ; Capt. Graham, of Port Dalhousie, taking charge of the Lake Michigan. Capt. Daniel Ryan, who last season sailed the schooner A. C. Keating, has been appointed master of the schooner Ida Corning of the same line. Capt. George Harper has been appointed to the command of the steamer Kitty M. Forbes.

Affairs in Admiralty.

While in tow of the schooner Roumania, laden with ore and coming out of Escanaba, the schooner Erastus Corning struck a sunken shoal. C. E. Chilson, owner of the Corning, sought to recover damages from the owner of the Roumania by instituting suit in the United States district court at Detroit. The suit was dismissed a few days ago and it is more than probable that a settlement was reached. The settlement could not have been favorable to the Corning, as the owners of the Roumania were understood to have a very good defense. They had the benefit of a similar case on the St. Lawrence river a short time ago decided in favor of the steamboat and the authorities have repeatedly held that a steamboat engaged for towing purposes is not a common carrier.

One of Chief Justice Brown's latest decisions while sitting in the district court at Detroit in December last, was in the case of the owners of the tug Major Dana against the owners of the propeller Albany. The stranding of the package freight carrier Albany on Poe's reef, near Cheboygan, in the Straits of Mackinaw, late in November, 1887, and the subsequent plundering of a large portion of her valuable cargo that had been lightered or thrown overboard, was the subject of a great deal of comment at the time, and the conclusions of Judge Brown are of special interest as regards all such cases. The tug Major Dana with two lighters had been hired by Capt. Frank Williams, of the Albany, to assist in releasing his boat, and the suit in question was based on libel proceedings begun by the owners of the tug and lighters to recover $805 for services rendered under the contract with the master. An answer and cross libel for embezzlement alleged, however, that it was the duty of the master and crews of the tug and lighters to take all proper care and use all proper skill in such service, and in saving such part of the cargo as they might receive on the tug and lighters for the owners. It was claimed that the services had been performed in so careless, negligent and incompetent a manner that a large amount of the property was lost. In summing up the case the court held : First.—A salvor is bound to take such care of the property saved as a prudent person takes of his own property, and is liable for the plundering or embezzlement of such property by his servants or agents. Second.—While the master of the stranded vessel may, in case of urgent necessity, throw overboard or otherwise sacrifice his cargo to obtain the release of his vessel, he has no right to give it away. Under such circumstances the person to whom the property is given takes no title to it, is liable therefore as bailee, and is bound to surrender it upon demand of the owner. Third.—The owners of the tug contracted to render certain services to the stranded propeller for an hourly compensation. During the performance of such services the tug received on board a part of the cargo of the propeller, which the officers and crew of the tug subsequently embezzled and divided among themselves. The owners of the tug were chargeable with the value of the property so embezzled. Fourth.—Two lighters which also belonged to the wreckers were also employed in removing portions of her cargo, and were sent by the wreckers to a wharf where the public could obtain access by day or night. While there a party of marauders came during the night and, by collusion with the men in charge of the lighters, stole a large part of their cargoes. The wreckers were guilty of negligence in failing to take proper care of the property and were liable for its value. Fifth.—During the performance of these services the officers of the tug entered into a corrupt agreement with the men in charge of two other lighters, in which the tug owners had no interest, to tow them to the propeller and back for a share in such part of the cargo as they might secure. These lighters were also laden with the cargo of the propeller, all of which was subsequently embezzled or stolen. This agreement was not binding upon the owners of the tug and they were not liable for the property so embezzled.

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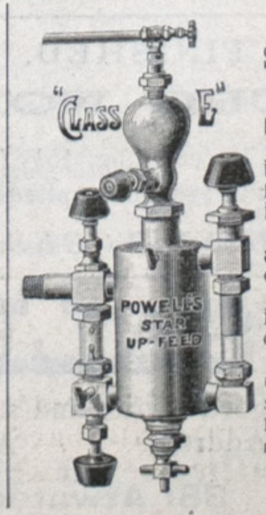
Monarch Valve Cylinder and Engineers Valve Oils,
THE MOST PERFECT CYLINDER OILS FOR MARINE USE.
EVERY BARREL GUARANTEED.

TO SHIP BUILDERS. UNITED STATES Engineer Office, 157 Ottawa Street, Grand Rapids, Mich., January 17, 1891. Sealed proposals, in duplicate, for building a new hull for the U. S. Engineer Tug "Graham," now at St. Joseph, Mich., will be received at this office until noon of Tuesday, February 17, 1891. Preference will be given to materials of domestic production and manufacture, conditions of quality and price (import duties included), being equal. Attention is invited to acts of Congress approved February 26, 1885, and February 23, 1887, vol. 23 page 332, and vol. 24 page 414, Statutes at Large. The government reserves the right to reject any or all proposals. For information, specifications and blank forms address as above. WILLIAM LUDLOW, Major, Corps of Engineers, Bvt. Lt. Col. U. S. A. f12



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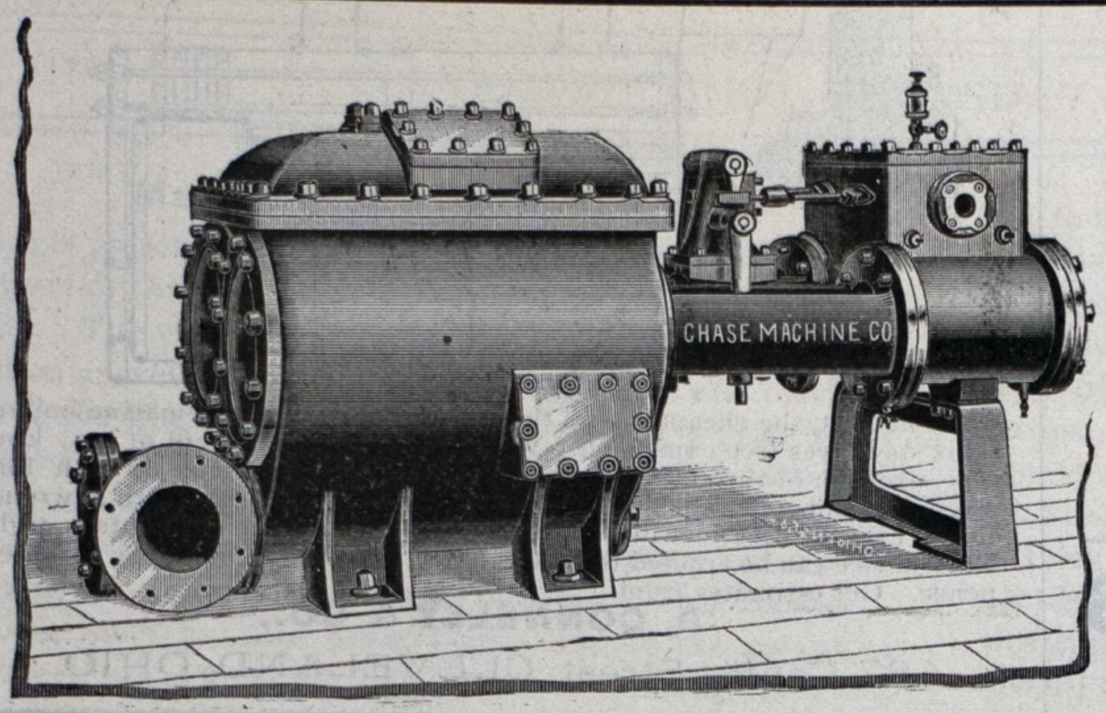

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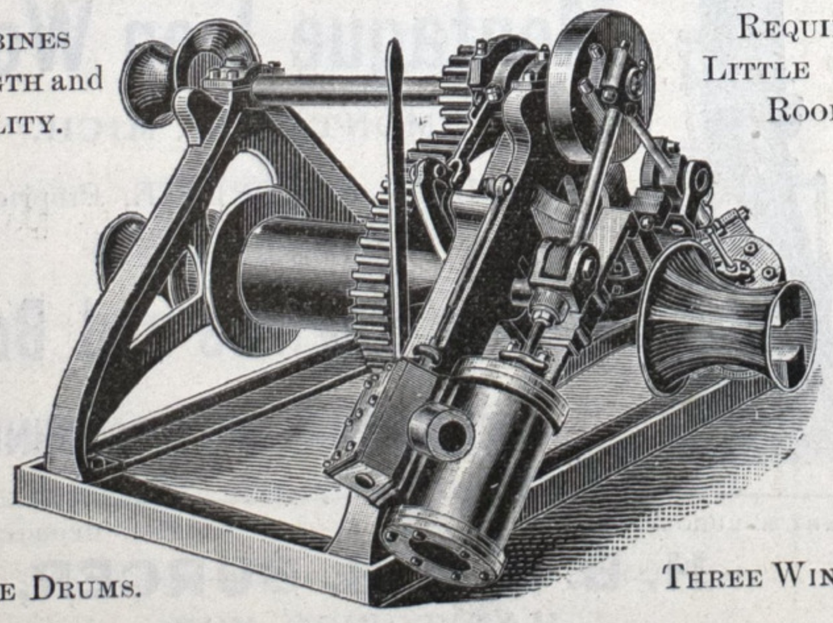

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JOS. A. NICOLSEN, Master Str. Queen of the West.

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DEAR SIRS: Going up Lake Huron last fall during a heavy gale of wind and a big sea running, a fire broke out in one of the rooms of the steamer Fayette Brown, through the accidental upsetting of a lamp among some papers, and had gained considerable headway before discovered. By the prompt use of one of your Chemical Engines it was quickly subdued, and I think there was less than a pint of the fluid used. Have no doubt the fire would have given us lots of trouble without some such prompt and easy way of extinguishing it. Since that time I do not think a steamboat properly fitted out without the Miller Chemical Engine.

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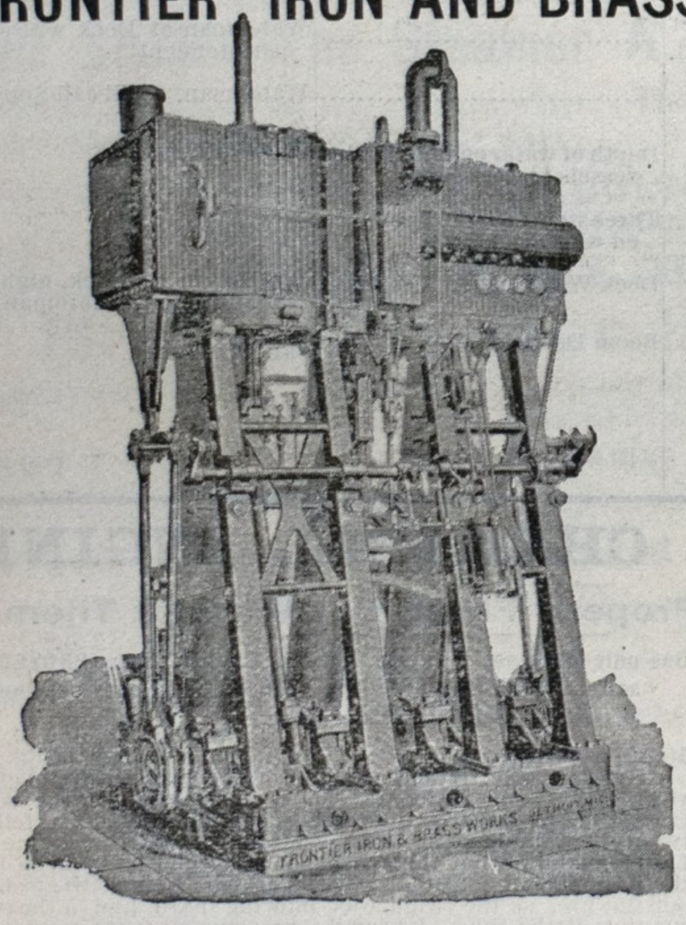

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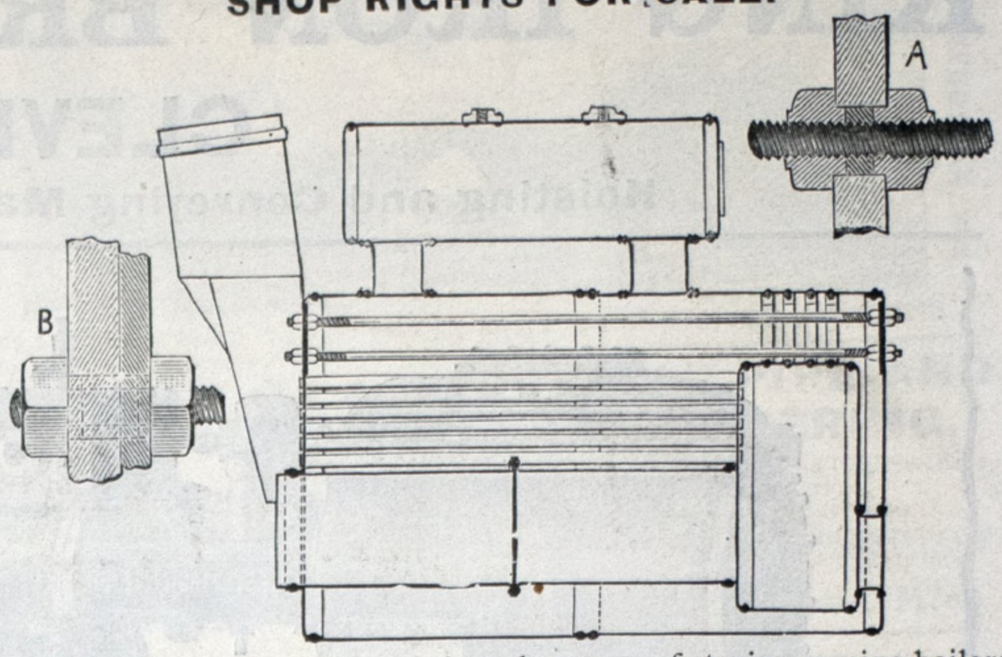

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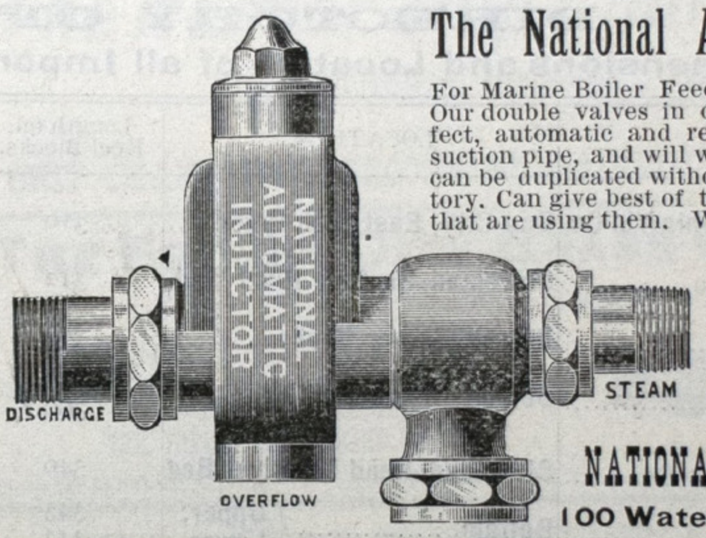

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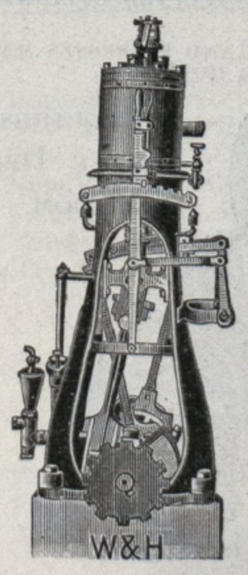

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